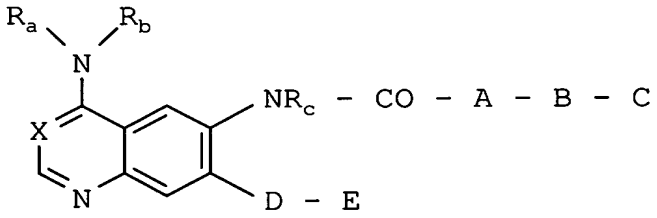
Whati is claimed is:

1. A compound of the formula



, (I)

wherein

R_a denotes a hydrogen atom or a methyl group,

R_b denotes a phenyl, benzyl- or 1-phenylethyl group wherein the phenyl nucleus is substituted in each case by the groups R_1 to R_3, while

R_1 and R_2, which may be identical or different, in each case denote a hydrogen, fluorine, chlorine, bromine or iodine atom,

a methyl, ethyl, hydroxy, methoxy, ethoxy, amino, cyano, vinyl or ethynyl group,

an aryl, aryloxy, arylmethyl or arylmethoxy group,

a methyl or methoxy group substituted by 1 to 3 fluorine atoms or

R_1 together with R_2, if they are bound to adjacent carbon atoms, denote a -CH=CH-CH=CH, -CH=CH-NH- or -CH=N-NH group and

R_3 denotes a hydrogen, fluorine, chlorine or bromine atom,

R_c denotes a hydrogen atom or a methyl group,

X denotes a methyne group substituted by a cyano group or a nitrogen atom,

A denotes a 1,1- or 1,2-vinylene group which may be substituted in each case by one or two methyl groups or by a trifluoromethyl group,

an ethynylene group or

a 1,3-butadien-1,4-ylene group optionally substituted by a methyl or trifluoromethyl group,

B denotes an alkylene or -CO-alkylene group wherein the alkylene moiety in each case contains 1 to 4 carbon atoms, while the linking of the -CO-alkylene group to the adjacent group A in each case must take place via the carbonyl group,

a -CO-O-alkylene- or -CO-NR_4-alkylene group wherein the alkylene moiety in each case contains 1 to 4 carbon atoms, while the linking to the adjacent group A in each case must take place via the carbonyl group, wherein

R_4 denotes a hydrogen atom or a methyl or ethyl group,

or a carbonyl group,

C denotes a 2-oxo-morpholin-4-yl group substituted by the group R_5 or by the group R_5 and a C_{1-4}-alkyl group, while

R_5 denotes a C_{3-4}-alkyl, hydroxy-C_{1-4}-alkyl, C_{1-4}-alkoxy-C_{1-4}-alkyl, di-(C_{1-4}-alkyl)-amino-C_{1-4}-alkyl, pyrrolidino-C_{1-4}-alkyl, piperidino-C_{1-4}-alkyl, morpholino-C_{1-4}-alkyl, 4-(C_{1-4}-alkyl)-piperazino-C_{1-4}-alkyl, C_{1-4}-alkylsulphanyl-C_{1-4}-alkyl, C_{1-4}-alkylsulphinyl-C_{1-4}-alkyl, C_{1-4}-alkylsulphonyl-C_{1-4}-alkyl, cyano-C_{1-4}-alkyl, C_{1-4}-alkoxycarbonyl-C_{1-4}-alkyl, aminocarbonyl-C_{1-4}-alkyl, C_{1-4}-alkyl-aminocarbonyl-C_{1-4}-alkyl, di-(C_{1-4}-alkyl)aminocarbonyl-C_{1-4}-alkyl, pyrrolidinocarbonyl-C_{1-4}-alkyl, piperidinocarbonyl-

C_{1-4}-alkyl, morpholinocarbonyl-C_{1-4}-alkyl or a 4-(C_{1-4}-alkyl)-piperazinocarbonyl-C_{1-4}-alkyl group,

a 2-oxo-morpholin-4-yl group substituted by two groups R_5, where R_5 is as hereinbefore defined and the two groups R_5 may be identical or different,

a 2-oxo-morpholin-4-yl group, wherein the two hydrogen atoms of a methylene group are replaced by a $-(CH_2)_m$, $-CH_2-Y-CH_2$, $-CH_2-Y-CH_2-CH_2$, $-CH_2CH_2-Y-CH_2CH_2-$ or $-CH_2CH_2-Y-CH_2CH_2CH_2-$ bridge optionally substituted by one or two C_{1-2}-alkyl groups, while

m denotes the number 2, 3, 4, 5 or 6 and
Y denotes an oxygen or sulphur atom, a sulphinyl, sulphonyl or C_{1-4}-alkylimino group,

a 2-oxo-morpholin-4-yl group, wherein a hydrogen atom in the 5 position together with a hydrogen atom in the 6 position is replaced by a $-(CH_2)_n$, $-CH_2-Y-CH_2$, $-CH_2-Y-CH_2CH_2-$ or $-CH_2CH_2-Y-CH_2$-bridge, while

Y is as hereinbefore defined and
n denotes the number 2, 3 or 4,

or, if D together with E denotes a group R_d, it may also denote a 2-oxo-morpholin-4-yl group which may be substituted by 1 to 4 C_{1-2}-alkyl groups,

D denotes a -O-C_{1-6}-alkylene group, while the alkylene moiety is linked to the group E, or

an oxygen atom, while this may not be linked to a nitrogen atom of the group E, and

E denotes an amino group substituted by 2 C_{1-4}-alkyl groups, wherein the alkyl groups may be identical or different and each alkyl moiety may be substituted from the 2 position by a C_{1-4}-alkoxy or di-(C_{1-4}-alkyl)-amino group or by a 4- to 7-membered alkyleneimino group,

while in the abovementioned 6- to 7-membered alkyleneimino groups in each case a methylene group may be replaced in the 4 position by an oxygen or sulphur atom or by a sulphinyl, sulphonyl- or N-(C_{1-4}-alkyl)-imino group,

a 4- to 7-membered alkyleneimino group optionally substituted by 1 to 4 methyl groups,

a 6- to 7-membered alkyleneimino group optionally substituted by 1 or 2 methyl groups, wherein in each case a methylene group in the 4 position is replaced by an oxygen or sulphur atom or by a sulphinyl, sulphonyl- or N-(C_{1-4}-alkyl)-imino group,

an imidazolyl group optionally substituted by 1 to 3 methyl groups,

a C_{5-7}-cycloalkyl group, wherein a methylene group is replaced by an oxygen or sulphur atom or by a sulphinyl, sulphonyl or N-(C_{1-4}-alkyl)-imino group, or

D together with E denotes a hydrogen atom,

a C_{1-6}-alkoxy group optionally substituted from the 2 position by a hydroxy- or C_{1-4}-alkoxy group,

a C_{3-7}-cycloalkoxy- or C_{3-7}-cycloalkyl-C_{1-4}-alkoxy group,

or a group R_d, where

R_d denotes a C_{2-6}-alkoxy group which is substituted from the 2 position by a C_{4-7}-cycloalkoxy- or C_{3-7}- cycloalkyl-C_{1-3}-alkoxy group,

a C_{4-7}-cycloalkoxy- or C_{3-7}-cycloalkyl-C_{1-6}-alkoxy group wherein the cycloalkyl moiety in each case is substituted by a C_{1-4}-alkyl, C_{1-4}-alkoxy, di-(C_{1-4}-alkyl)-amino, pyrrolidino, piperidino, morpholino, piperazino, 4-(C_{1-2}-alkyl)-piperazino, C_{1-4}-alkoxy-C_{1-2}-alkyl, di-(C_{1-4}-alkyl)-amino-C_{1-2}-alkyl, pyrrolidino-C_{1-2}-alkyl, piperidino-C_{1-2}-alkyl, morpholino-

C_{1-2}-alkyl, piperazino-C_{1-2}-alkyl- or 4-(C_{1-2}-alkyl)-piperazino-C_{1-2}-alkyl group, while the abovementioned cycloalkyl moieties may additionally be substituted by a methyl or ethyl group,

while, unless otherwise stated, by the aryl moieties mentioned in the definition of the abovementioned groups is meant a phenyl group which may be mono- or disubstituted by R_6, while the substituents may be identical or different and

R_6 denotes a fluorine, chlorine, bromine or iodine atom, a C_{1-2}-alkyl, trifluoromethyl or C_{1-2}-alkoxy group, or

two groups R_6, if they are bound to adjacent carbon atoms, together represent a C_{3-4}-alkylene, methylenedioxy or 1,3-butadien-1,4-ylene group,

or a tautomer or salt thereof.

2. A compound of the formula I according to claim 1, wherein

R_a denotes a hydrogen atom,

R_b denotes a benzyl or 1-phenylethyl group or a phenyl group substituted by the groups R_1 and R_2, while

R_1 denotes a hydrogen, fluorine, chlorine or bromine atom, a methyl, trifluoromethyl, cyano or ethynyl group and
R_2 denotes a hydrogen or fluorine atom,

R_c denotes a hydrogen atom,

X denotes a nitrogen atom,

A denotes a 1,2-vinylene group,

B denotes a C_{1-4}-alkylene group,

C denotes a 2-oxo-morpholin-4-yl group substituted by the group R_5 or by the group R_5 and a C_{1-4}-alkyl group, while

R_5 denotes a C_{3-4}-alkyl, C_{1-2}-alkoxy-C_{1-4}-alkyl, di-(C_{1-2}-alkyl)-amino-C_{1-4}-alkyl, pyrrolidino-C_{1-4}-alkyl, piperidino-C_{1-4}-alkyl, morpholino-C_{1-4}-alkyl, 4-(C_{1-2}-alkyl)-piperazino-C_{1-4}-alkyl, C_{1-2}-alkylsulphanyl-C_{1-4}-alkyl, C_{1-2}-alkylsulphinyl-C_{1-4}-alkyl, C_{1-2}-alkylsulphonyl-C_{1-4}-alkyl, cyano-C_{1-4}-alkyl, C_{1-2}-alkoxycarbonyl-C_{1-4}-alkyl, aminocarbonyl-C_{1-4}-alkyl, C_{1-2}-alkyl-aminocarbonyl-C_{1-4}-alkyl, di-(C_{1-2}-alkyl)-aminocarbonyl-C_{1-4}-alkyl, pyrrolidinocarbonyl-C_{1-4}-alkyl, piperidinocarbonyl-C_{1-4}-alkyl, morpholinocarbonyl-C_{1-4}-alkyl- or a 4-(C_{1-2}-alkyl)-piperazinocarbonyl-C_{1-4}-alkyl group,

a 2-oxo-morpholin-4-yl group substituted by two groups R_5, while R_5 is as hereinbefore defined and the two groups R_5 may be identical or different,

a 2-oxo-morpholin-4-yl group, wherein the two hydrogen atoms of a methylene group are replaced by a -$(CH_2)_m$, -CH_2-Y-CH_2, -CH_2-Y-CH_2-CH_2- or -CH_2CH_2-Y-CH_2CH_2-bridge, while

m denotes the number 2, 3, 4 or 5 and
Y denotes an oxygen or sulphur atom, a sulphinyl, sulphonyl or C_{1-2}-alkylimino group,

a 2-oxo-morpholin-4-yl group, wherein a hydrogen atom in the 5 position together with a hydrogen atom in the 6 position is replaced by a -$(CH_2)_n$, -CH_2-Y-CH_2, -CH_2-Y-CH_2CH_2- or -CH_2CH_2-Y-CH_2-bridge, where

Y is as hereinbefore defined and
n denotes the number 2, 3 or 4,

or, if D together with E denotes a group R_d, it may also denote a 2-oxo-morpholin-4-yl group which may be substituted by 1 or 2 methyl or ethyl groups,

D denotes a -O-C_{1-4}-alkylene group, while the alkylene moiety is linked to the group E, and

E denotes a dimethylamino, diethylamino, pyrrolidino, piperidino, morpholino, 4-methyl-piperazino- or 4-ethyl-piperazino group or

D together with E denotes a hydrogen atom,

a methoxy, ethoxy, 2-methoxy-ethoxy, 3-methoxy-propyloxy, tetrahydrofuran-3-yloxy, tetrahydropyran-3-yloxy, tetrahydropyran-4-yloxy, tetrahydrofuranylmethoxy or tetrahydropyranylmethoxy group,

a cyclobutyloxy, cyclopentyloxy, cyclohexyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy or cyclohexylmethoxy group or

a group R_d, where

R_d denotes a 2-(cyclobutyloxy)-ethoxy, 2-(cyclopentyloxy)-ethoxy, 2-(cyclopropylmethoxy)-ethoxy or 2-(cyclobutylmethoxy)-ethoxy group,

or a tautomer or salt thereof.

3. A compound of the formula I according to claim 1, wherein

R_a denotes a hydrogen atom,

R_b denotes a 1-phenylethyl, 3-methylphenyl, 3-chlorophenyl, 3-bromophenyl- or 3-chloro-4-fluorophenyl group,

R_c denotes a hydrogen atom,

X denotes a nitrogen atom,

A denotes a 1,2-vinylene group,

B denotes a methylene group,

C denotes a 2-oxo-morpholin-4-yl group which is substituted by a methoxymethyl, methoxyethyl, ethoxymethyl, ethoxyethyl, dimethylaminomethyl, dimethylaminoethyl, diethylaminomethyl, diethylaminoethyl, cyanomethyl or cyanoethyl group,

a 2-oxo-morpholin-4-yl group, wherein the two hydrogen atoms of a methylene group are replaced by a $-CH_2CH_2$, $-CH_2CH_2CH_2$, $-CH_2CH_2CH_2CH_2$, $-CH_2CH_2CH_2CH_2CH_2$, $-CH_2-O-CH_2CH_2$, $-CH_2-NCH_3-CH_2CH_2$, $-CH_2-NC_2H_5-CH_2CH_2$, $-CH_2CH_2-O-CH_2CH_2$, $-CH_2CH_2-NCH_3-CH_2CH_2-$ or $-CH_2CH_2-NC_2H_5-CH_2CH_2-$ bridge,

a 2-oxo-morpholin-4-yl group, wherein a hydrogen atom in the 5 position together with a hydrogen atom in the 6 position is replaced by a $-CH_2CH_2CH_2$, $-CH_2CH_2CH_2CH_2$, $-CH_2-O-CH_2$, $-CH_2-NCH_3-CH_2$, $-CH_2-NC_2H_5-CH_2$, $-CH_2-O-CH_2CH_2$, $-CH_2-NCH_3-CH_2CH_2$, $-CH_2-NC_2H_5-CH_2CH_2$, $-CH_2CH_2-O-CH_2$, $-CH_2CH_2-NCH_3-CH_2-$ or $-CH_2CH_2-NC_2H_5-CH_2-$ bridge,

or, if D together with E denotes a group R_d, it may also denote a 2-oxo-morpholin-4-yl group which is substituted by 1 or 2 methyl groups, and

D together with E denotes a hydrogen atom,

a methoxy, ethoxy, 2-methoxy-ethoxy, 3-methoxy-propyloxy, tetrahydrofuran-3-yloxy, tetrahydropyran-4-yloxy or tetrahydrofuranylmethoxy group,

a cyclobutyloxy, cyclopentyloxy, cyclopropylmethoxy, cyclobutylmethoxy or cyclopentylmethoxy group or

a group R_d, where

R_d denotes a 2-(cyclobutyloxy)-ethoxy, 2-(cyclopentyloxy)-ethoxy, 2-(cyclopropylmethoxy)-ethoxy or 2-(cyclobutylmethoxy)-ethoxy group,

or a tautomer or salt thereof.

4. A compound of the formula I according to claim 1, wherein

R_a denotes a hydrogen atom,

R_b denotes a 3-chloro-4-fluorophenyl group,

R_c denotes a hydrogen atom,

X denotes a nitrogen atom,

A denotes a 1,2-vinylene group,

B denotes a methylene group,

C denotes a 2-oxo-morpholin-4-yl group which is substituted by a methoxymethyl or methoxyethyl group, or

a 2-oxo-morpholin-4-yl group, wherein the two hydrogen atoms of a methylene group are replaced by a $-CH_2CH_2-O-CH_2CH_2-$ bridge, and

D together with E denotes a hydrogen atom, a methoxy or cyclopropylmethoxy group,

or a tautomer or salt thereof.

5. A compound selected from the group consisting of:

(1) 4-[(3-chloro-4-fluoro-phenyl)amino]-6-{[4-((*R*)-2-methoxymethyl-6-oxo-morpholin-4-yl)-1-oxo-2-buten-1-yl]amino}-7-cyclopropylmethoxy-quinazoline,

(2) 4-[(3-chloro-4-fluoro-phenyl)amino]-6-{[4-(2-oxo-1,9-dioxa-4-aza-spiro[5.5]undec-4-yl)-1-oxo-2-buten-1-yl]amino}-7-cyclopropylmethoxy-quinazoline and

(3) 4-[(3-chloro-4-fluoro-phenyl)amino]-6-({4-[2-(2-methoxy-ethyl)-6-oxo-morpholin-4-yl]-1-oxo-2-buten-1-yl}amino)-7-cyclopropylmethoxy-quinazoline,

or a tautomer or salt thereof.

6. A physiologically acceptable salt of a compound according to claim 1, 2, 3, 4 or 5, formed with an inorganic or organic acid or base.

7. A pharmaceutical composition comprising a compound according to claim 1, 2, 3, 4 or 5 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier or diluent.

8. A method of treating a benign or malignant tumour, a disease of the respiratory tract or lungs, polyps, a disease of the gastro-intestinal tract, bile duct or gall bladder, a disease of the kidneys or of the skin, which comprises administering a therapeutically effective

amount of a compound according claim 1, 2, 3, 4 or 5 or a pharmaceutically acceptable salt thereof.

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